भारतीय मानक

Indian Standard

IS 2405 (Part 2) : 2023

औद्योगिक छलनियाँ — विशिष्टि

भाग 2 तार छलनियाँ

(दूसरा पुनरीक्षण)

Industrial Sieves — Specification

Part 2 Wire Sieves

(Second Revision)

ICS 19.120

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भारतीय मानक ब्यूरो
BUREAU OF INDIAN STANDARDS
मानक भवन, 9 बहादुर शाह ज़फर मार्ग, नई दिल्ली - 110002
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI - 110002
www.bis.gov.in www.standardsbis.in

August 2023 **Price Group 8**

Sieves, Sieving and Other Sizing Methods Sectional Committee, CED 55

FOREWORD

This Indian Standard (Part 2) (Second Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Sieves, Sieving and Other Sizing Methods Sectional Committee had been approved by the Civil Engineering Division Council.

Industrial sieves are used in different activities in various industries for compliance grade screening purposes including for separation or grading of particles. According to the nature of the process and required percentage opening area, industrial sieves can be manufactured in the form of woven wire cloth, wire sieves or perforated plate sieves. A required percentage opening can be achieved with the various combinations of wire diameter/plates thickness, type of weave/shape of opening and pitch (in plates). The materials of wire and plates can be selected as per the process requirements.

The sizes within each series of sieve aperture follow a geometric progression. Therefore, each size of a series differs from the successive size by a constant percentage. Apart from the omission of a few unusual values in the range of the very small sizes, the ratios of the successive sizes are as follows:

Series from IS 1076 (*Part* 1)	*Ratio*
R 10	1.25
R 20	1.12
R 40	1.06

This standard was first published in 1963, and revised in 1980 with a view to covering the requirements of wire cloth and perforated plates having different shapes of apertures in the sizes most commonly used in a number of industries. This revision of the standard is brought out in three parts:

Part 1 Woven wire cloth sieves
Part 2 Wire sieves
Part 3 Perforated plate sieves

In this revision, the following major modifications has been incorporated:

a) Material requirements for the sieve media and frame have been improved and permit various new materials available;
b) The number of aperture sizes were considerably increased to align with the current international practices;
c) Formula to calculate the open screening area has been incorporated;
d) Various types of weaves and its sieves conversion factors have been incorporated;
e) Tolerance on wire diameter has been try to aligned with the available Indian standards; and
f) Separate clause has been added for the information to be supplied by the purchaser.

This standard (Part 2) covers requirements of industrial screen manufactured by pre-crimping or welding of wire. The nominal sizes of openings specified in this standard are taken from the R 10, R 20 and R 40/3 series of preferred numbers in accordance with IS 1076 (Part 1) : 1985/ISO 3 : 1973 ‘Preferred numbers: Part 1 Series of preferred numbers’. For making R 40/3 series, every third value of R40 series is taken.

In the formulation of this standard due weightage has been given to international co-ordination among the standards and practices prevailing in different countries in addition to relating it to the practices in the field in this country. This has been met by deriving assistance from the following publications:

ISO 14315 : 1997 Industrial wire screens — Technical requirements and testing

ISO 4783 (Part 3) : 1981 Industrial wire screens and industrial wire cloth — Guide to the choice of aperture size and wire diameter combinations: Part 3 Preferred combinations for pre-crimped or pressure-welded wire screens

(*Continued on third cover*)

Indian Standard

INDUSTRIAL SIEVES — SPECIFICATION
PART 2 WIRE SIEVES

(Second Revision)

1 SCOPE

This standard (Part 2) lays down the requirements regarding material, construction, dimension and finish of industrial wire sieve for Pre-crimped and welded wire sieve used for industrial sieving purposes. It applies to industrial wire sieves of aperture size from 1 mm to 125 mm with square aperture.

2 REFERENCES

The standards given below contain provisions, which through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent edition of these standards:

IS No.	*Title*
IS 5742 : 2022	Glossary of terms relating to industrial screen and screening (*first revision*)
IS 18061: 2023	Selection of aperture size, percentage open area and wire diameter combination for industrial screens — Guidelines

3 TERMINOLOGY

For the purpose of this standard, the definitions given in IS 5742 and the following shall apply.

3.1 Aperture Width (w) — Distance between two adjacent warp or weft wires, measured in the projected plane at the mid positions (*see* Fig. 1).

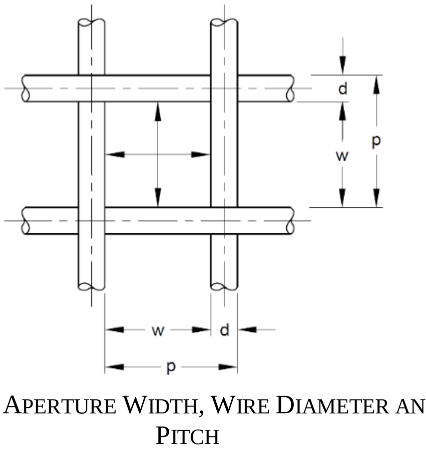


FIG. 1 APERTURE WIDTH, WIRE DIAMETER AND PITCH

3.2 Open Screening Area (A_o) — Percentage of the surface of all the apertures in the total sieving surface.

NOTE — The open screening area is calculated as the ratio of the square of the nominal aperture width, w and the square of the nominal pitch, $p = w + d$, rounded to a full percentage value:

$$A_o = \frac{w^2}{(w+d)^2} \times 100 \text{ percent}$$

3.3 Pitch (p) — Distance between the mid-points of two adjacent wires.

NOTE — The pitch is the sum of the aperture width, w, and the wire diameter, d (*see* Fig. 1).

3.4 Warp — All wires running lengthwise in the cloth as woven.

3.5 Weft — All wires running crosswise in the cloth as woven.

3.6 Wire Diameter (d) — Diameter of the wire used for making woven wire cloth sieve.

3.7 Wire Sieve — The sieve produced by welding pre-crimped wires to form uniform square apertures and it can be framed.

4 MANUFACTURING AND CONSTRUCTION

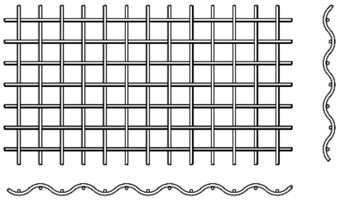
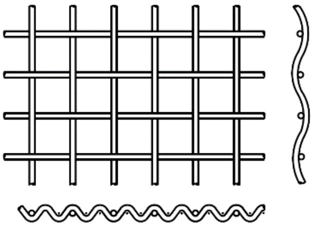
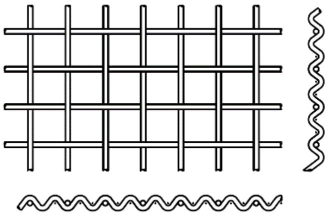
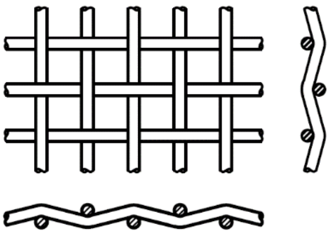
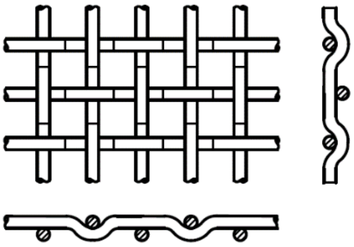
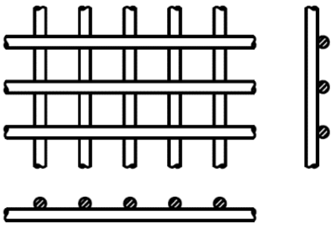
4.1 Any suitable material such as steel, bronze, brass, stainless steel, aluminium and synthetic material may be used as per relevant Indian Standard for wire and frame of woven wire cloth sieves. The selection of material is done in such a way that used material should be compatible with the process and the material to be sieved, and should not be detrimental in achieving desired sieving quality. The wire used in the manufacture of the sieving surface shall be well and cleanly drawn free from scale, inequalities, splits, etc of uniform ductility throughout to avoid hard lumps or soft spots in the finished sieving surface. The sieving surface can be framed as per the agreement between manufacture and purchaser.

4.2 The following factors are considered during the selection of wire sieve material:

a) The final application of the wire sieve, for example, resistance to environmental corrosion, compatibility with food products, etc; and
b) Further processing, for example, suitability for shaping, welding, and surface treatment.

4.3 Pre-crimped or welded sieves for industrial purposes shall be manufactured in various types of weaves as given in Table 1.

Table 1 Types of Weaves and Sieves Conversion Factors
(*Clause* 4.3)

Sl No. (1)	Type (2)	Figure (3)	Designation (4)	Sieve Conversion Factor, *f* (5)
i)	A		Double crimp sieve	1.00
ii)	B		Single intermediate crimp sieve	1.03
iii)	C		Double intermediate crimp sieve	1.06
iv)	D		Lock crimp sieve	1.03
v)	E		Flat-top sieve	1.00
vi)	F		Pressure-welded sieve	0.98

NOTE — These factor are given as a guideline. Actual values may vary depending on the manufacturing process.

5 REQUIREMENTS

5.1 Aperture Width and Wire Diameter Combination

As per the process requirements, the aperture width, open area in percentage and wire diameter shall be selected from Annex A. It is recommended to select the aperture width from R 10 series, whenever possible, but if a smaller aperture width is required it should be drawn from R 20 or R 40/3 as per Annex A. Testing for wire diameter and aperture width shall be done as per Annex B.

NOTE — As agreed between the manufacturer and the purchaser, other aperture width and wire diameter combination may also manufacture as per IS 18061: 2023 'Selection of aperture size, percentage open area and wire diameter combination for industrial screens — Guidelines'.

5.2 Maximum Permissible Errors on Aperture Width

The measurement shall be taken separately in warp and weft directions as per Annex B.

5.2.1 *Maximum Permissible Error on Average Aperture Width* (Y_s)

The maximum permissible errors on average aperture width shall be as per Table 2.

5.2.2 *Maximum Permissible Error on Individual Aperture Width* (X_s)

The maximum permissible errors on Individual aperture width shall be as per Table 2. Value exceeding X_s is deemed to be a major blemish. Negative deviations of single aperture widths do not affect the sieving process, so values for X_s have only positive deviations, but with a maximum value of $X_s = w$. This is the maximum permissible deviation of a single aperture measured separately in both warp and weft directions.

Table 2 Maximum Permissible Error on Aperture Width (w)
(*Clauses* 5.2.1 *and* 5.2.2)

Sl No.	**Nominal Aperture Width**, w mm	**Tolerances on Aperture Width**	
		Average Aperture Width $\pm Y_s$ percent	Individual Aperture Width $+X_s$ percent
(1)	(2)	(3)	(4)
i)	Over 63 mm up to 125 mm	2.50	5.00
ii)	Over 31.5 mm up to 63 mm	3.00	7.00
iii)	Over 16 mm up to 31.5 mm	3.50	8.00
iv)	Over 8 mm up to 16 mm	4.00	10.00
v)	Over 4 mm up to 8 mm	5.00	13.00
vi)	Over 2 mm up to 4 mm	5.00	16.00
vii)	1 mm up to 2 mm	5.00	20.00

5.3 Tolerance on Wire Diameter

The tolerance on wire diameter, given in the relevant Indian standard for the wire used for the manufacturing of woven wire cloth sieve shall be applicable, in absence of that Table 3 shall be applicable. The wire diameter is measured as per Annex B. The tolerance limit shall apply to wire diameter of both warp and weft wire separately.

Table 3 Tolerances on Nominal Diameters
(*Clause* 5.3)

Sl No.	**Nominal Diameter of Wire** d	**Tolerance on Nominal Diameter of Wires** Δd percent	
		Steel	Other Than Steel
(1)	(2)	(3)	(4)
i)	Over 10 mm and above	1.00	0.75
ii)	Over 5 mm up to 10 mm	2.00	1.50
iii)	Over 1 mm up to 5 mm	3.00	2.00
iv)	Over 0.25 mm up to 1 mm	5.00	3.00
v)	Over 0.1 mm up to 0.25 mm	6.00	5.00
vi)	Up to 0.1 mm	7.00	6.00

6 FRAME FOR INDUSTRIAL SIEVE

The sieve frame may be manufactured from any suitable material, such as bronze, brass, stainless steel or synthetic materials. Frame for industrial sieve are generally manufactured in round and square shape. The shape and dimension of the frame may be manufactured as per the agreement between manufacture and the purchaser. The purchaser should state specific requirements in the enquiry.

7 FINISH

The surface of sieving media and sieving frame shall be smoothly finished. There shall be no lacquer on surfaces which come into contact with sample. The sieve shall nest snugly with each other and with the lid and receiver of the same shape and size so that scape of sample material during the test sieving operation is prevented.

8 DESIGNATION OF WIRE SIEVES

Designation of the wire sieve shall comprise the following detail with word ‘wire sieve’:

a) aperture width, w in mm or micrometres;
b) wire diameter, d in mm or micrometres;
c) material of wire sieve wires; and
d) types of weave.

Example:

> For steel wire sieve having lock crimp weave with aperture size of 5.0 mm and wire diameter of 1.6 mm, the designation shall be:
>
> (wire sieve, $w - 5.0$ mm, $d - 1.6$ mm, steel, lock crimp)

9 INFORMATION TO BE SUPPLIED BY THE PURCHASER

The purchaser should state the following with any enquiry and order:

a) designation of the wire sieve;
b) wire sieve material with its all technical details such as grade/class/types/finish, as per relevant Indian Standard, etc;
c) frame dimension and its material; and
d) any other information, if required.

10 MARKING

10.1 The wire sieve shall have marked or attached label or tag on which the following information shall be legibly and indelibly marked:

a) manufacturer’s name or trade-mark;
b) wire sieve and frame material with its all technical details such as grade/class/types/finish, as per relevant Indian Standard, etc;
c) designation of wire sieve;
d) dimensions of frame;
e) batch number or date of manufacture; and
f) any other information, if required.

10.2 BIS Certification Marking

The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act*, 2016 and the Rules and Regulations framed thereunder, and the product(s) may be marked with the Standard Mark.

ANNEX A

(*Clause* 5.1)

APERTURE WIDTH AND WIRE DIAMETER COMBINATION

Width of Aperture			Diameter of Wire	Open Area
R 10 w mm	R 20 w mm	R 40/3 w mm	D mm	A_o percent
125	125	125	10.0	86
			12.5	83
			16.0	79
			20.0	74
			25.0	69
	112		10.0	84
			12.5	81
			16.0	77
			20.0	72
		106	10.0	84
			12.5	80
			16.0	75
			20.0	71
			25.0	65
100	100		10.0	83
			12.5	79
			16.0	74
			20.0	69
			25.0	64
	90	90	10.0	81
			12.5	77
			16.0	72
			20.0	67
80	80		10.0	79
			12.5	75
			16.0	69
			20.0	64
		75	10.0	78
			12.5	73
			16.0	69
			20.0	62
	71		10.0	77
			12.5	72
			16.0	67
			20.0	61
63	63	63	8.00	79
			10.0	74
			12.5	70
			16.0	64
	56		8.00	77
			10.0	72
			12.5	67
			16.0	61
		53	8.00	75
			10.0	71
			12.5	65
			16.0	59
50	50		6.30	79
			8.00	74

Width of Aperture			**Diameter of Wire**	**Open Area**
R 10 w mm	R 20 w mm	R 40/3 w mm	D mm	A_o percent
			10.0	69
			12.5	64
			16.0	57
	45	45	6.30	77
			8.00	72
			10.0	67
			12.5	61
			16.0	54
40	40		6.30	75
			8.00	69
			10.0	64
			12.5	58
		37.5	6.30	74
			8.00	68
			10.0	63
			12.5	56
	35.5		5.00	77
			6.30	72
			8.00	67
			10.0	61
31.5	31.5	31.5	5.00	74
			6.30	69
			8.00	64
			10.0	58
	28		5.00	72
			6.30	67
			8.00	60
			10.0	54
		26.5	5.00	71
			6.30	65
			8.00	59
			10.0	53
25	25		4.00	74
			5.00	69
			6.30	64
			8.00	57
			10.00	51
	22.4	22.4	4.00	72
			5.00	67
			6.30	61
			8.00	54
20	20		3.15	75
			4.00	69
			5.00	64
			6.30	58
			8.00	51
		19	4.00	68
			5.00	63
			6.30	56
			8.00	50
	18		3.15	72
			4.00	67
			5.00	61
			6.30	55
			8.00	48

Width of Aperture			Diameter of Wire	Open Area
R 10 w mm	R 20 w mm	R 40/3 w mm	D mm	A_o percent
16	16	16	2.50	75
			3.15	70
			4.00	64
			5.00	58
			6.30	51
	14		2.50	72
			3.15	67
			4.00	60
			5.00	54
			6.30	48
		13.2	3.15	65
			4.00	59
			5.00	53
			6.30	46
12.5	12.5		2.50	69
			3.15	64
			4.00	57
			5.00	51
			6.30	44
	11.2	11.2	2.50	67
			3.15	61
			3.55	58
			4.00	54
			5.00	48
10	10		2.00	69
			2.50	64
			3.15	58
			4.00	51
			5.00	44
		9.5	2.24	65
			3.15	56
			4.00	50
			5.00	43
	9		1.80	69
			2.24	64
			2.50	61
			3.15	55
			4.00	48
8	8	8	2.00	64
			2.50	58
			3.15	51
			3.55	48
			4.00	44
	7.1		1.80	64
			2.00	61
			2.50	55
			3.15	48
		6.7	1.80	62
			2.50	53
			3.15	46
			4.00	39
6.3	6.3		1.60	64
			2.00	58
			2.50	51
			3.15	44

Width of Aperture			**Diameter of Wire**	**Open Area**
R 10 w mm	R 20 w mm	R 40/3 w mm	D mm	A_o percent
	5.6	5.6	1.60	60
			2.00	54
			2.50	48
			3.15	41
5	5		1.60	57
			2.00	51
			2.50	44
			3.15	38
		4.75	1.60	56
			1.80	53
			2.24	47
			3.15	36
	4.5		1.40	58
			1.80	51
			2.24	45
			2.50	41
4	4	4	1.25	58
			1.60	51
			2.00	45
			2.24	41
			2.50	38
	3.55		1.25	55
			1.40	51
			1.60	48
			1.80	44
			2.00	41
		3.35	1.00	59
			1.25	53
			1.80	42
			2.24	36
3.15	3.15		1.12	54
			1.40	48
			1.60	44
			1.80	41
			2.00	37
	2.8	2.8	0.900	57
			1.12	51
			1.40	45
			1.80	37
2.5	2.5		1.00	51
			1.12	48
			1.25	44
			1.40	41
			1.60	37
		2.36	0.800	56
			1.00	49
			1.40	39
			1.80	32
	2.24		0.710	58
			0.900	51
			1.12	44
			1.40	38
2	2	2	0.710	54
			0.800	51
			0.900	48

Width of Aperture			Diameter of Wire	Open Area
R 10 w mm	R 20 w mm	R 40/3 w mm	D mm	A_o percent
			1.12	41
			1.25	38
	1.8		0.710	51
			0.900	45
			1.12	38
			1.40	32
		1.7	0.630	53
			0.800	46
			1.12	36
			1.40	30
1.6	1.6		0.500	58
			0.630	51
			0.800	44
			1.00	38
	1.4	1.4	0.450	57
			0.560	51
			0.710	44
			0.900	37
1.25	1.25		0.400	57
			0.500	51
			0.630	44
			0.800	37
		1.18	0.450	52
			0.630	43
			0.710	36
	1.12		0.450	51
			0.560	44
			0.710	37
1	1	1	0.400	51
			0.500	44
			0.630	38
			0.710	34

ANNEX B

(*Clauses* 5.1 *and* 5.2)

DETERMINATION OF WIRE DIAMETER AND APERTURE WIDTH

B-1 WIRE DIAMETER, d

The instrument used for measuring the diameter must have least count of 0.01 mm or better. The wire diameter may be determined by using one of the following procedures:

a) By measuring the wires in the cloth, if there is sufficient space for the measuring instrument; and
b) By an optical projection or scanning method.

B-2 APERTURE WIDTH, w

B-2.1 Average Aperture Width Maximum Permissible Error, Y_i

The minimum number of aperture to be considered in order to arrive average aperture shall be as per Table 4.

B-2.1.1 *Aperture Widths Greater than equal to* 1.0 *mm*

A steel rule, graduated in millimetres, shall be laid

Table 4 Minimum Number of Apertures to be Measured Separately in Warp and Weft Directions

(*Clause* B-2.1)

Sl No. (1)	Aperture Size, w (2)	Minimum Number of Apertures (3)
i)	Millimetre sizes 125 to 25	All in both directions (*Max* 25 in larger sieves with diameter more than 200 mm)
ii)	22.4 to 4	2 x 15
iii)	3.55 to 2.24	2 x 20
iv)	2 to 1.6	2 x 25
v)	1.4 to 1	2 x 40

NOTES — Explanation: 2 x 15 means 15 holes to be measured in both directions.

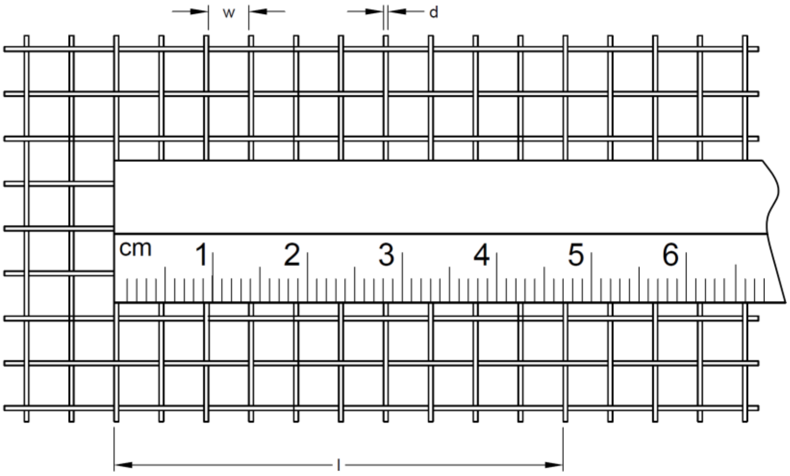


FIG. 2 ILLUSTRATION OF MEASUREMENT OF ROW WITH 10 PITCHES AND 47.5 mm LENGTH

along the warp and weft direction of the wire cloth (*see* Fig. 2). Optical measurement devices are allowed if they provide a resolution of less than 0.1 mm.

B-2.1.2 *Aperture Widths Less than* 1.0 *mm*

Any of the following test procedure may be opt for measuring aperture width less than 1 mm:

a) The number of wires visible under low-powered magnification over a known distance (counting glass) may be counted (*see* Fig. 3). The average aperture width may be calculated by deducting the wire diameter from the average pitch;

b) The number of wires per unit length in the warp or weft direction may be counted by using a microscope;

c) An optical interference method may be used to determine the number of pitches per unit length; and

d) Profile projector, image analyser, or optical scanning instruments may be used. On these instruments, a span of five times ten pitches is recommended for both warp and weft directions.

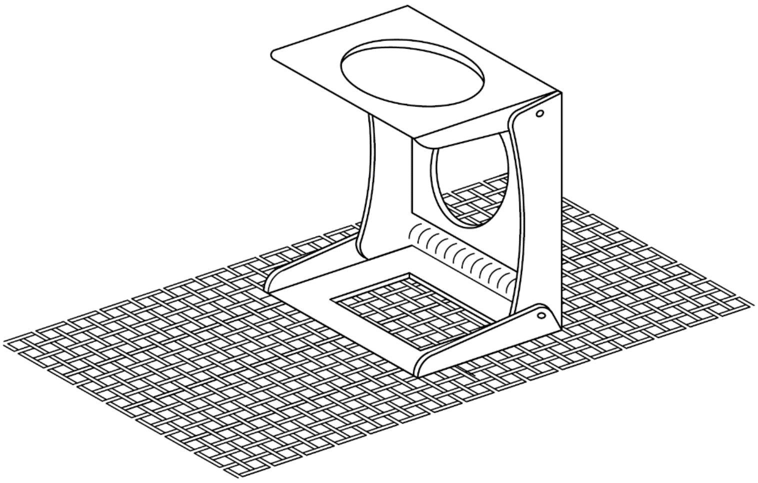


FIG. 3 COUNTING GLASS FOR MEASURING APERTURE WIDTHS LESS THAN 1 mm

ANNEX C

(*Foreword*)

APERTURE SIZE AND WIRE DIAMETER COMBINATION COVERED UNDER IS 2405 (PART 1) : 1980

C-1 Table 5 given the erstwhile wire cloth industrial sieve sizes as covered in the last version of this standard, namely IS 2405 (Part 1) ‘Specification for industrial sieves: Part 1 Wire cloth sieves (*first revision*)’.

Table 5 Aperture Size and Wire Diameter Combination

(*Clause* C-1)

Sl No.	**Width of Aperture** (R 20 Series)	**Heavy**		**Medium Heavy**		**Medium**		**Medium Light**		**Light**	
		Wire Diameter	Open Area	Wire Diameter	Open Area	Wire Diameter	Open Area	Wire Diameter	Open Area	Wire Diameter	Open Area
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	mm	mm	percent	mm	percent	mm	percent	mm	percent	mm	percent
i)	125	25.0	69	20.0	74	16.0	79	12.5	83	10.0	86
ii)	112	–	–	20.0	72	16.0	77	12.5	81	10.0	84
iii)	100	25.0	64	20.0	69	16.0	74	12.5	79	10.0	83
iv)	90	20.0	67	16.0	72	12.5	77	10.5	81	–	–
v)	80	20.0	64	16.0	69	12.5	75	10.5	79	–	–
vi)	71	20.0	61	16.0	67	12.5	72	10.5	77	–	–
vii)	63	16.0	64	12.5	70	10.0	74	8.0	79	–	–
viii)	56	16.0	61	12.5	67	10.0	72	8.0	77	–	–
ix)	50	16.0	57	12.5	64	10.0	69	8.0	74	6.30	79
x)	45	16.0	54	12.5	61	10.0	67	8.0	72	6.30	77
xi)	40	12.5	58	10.0	64	8.00	69	6.30	75	–	–
xii)	35.5	10.0	61	8.0	67	6.30	73	5.0	77	–	–
xiii)	31.5	10.0	58	8.0	64	6.30	70	5.0	75	–	–
xiv)	28	10.0	54	8.0	60	6.30	67	5.0	72	–	–
xv)	25	10.0	51	8.0	57	6.30	64	5.0	69	4.00	74
xvi)	22.4	8.0	54	6.30	61	5.00	67	4.0	72	–	–
xvii)	20	8.0	51	6.30	58	5.00	64	4.0	69	3.15	74
xviii)	18	8.0	48	6.30	55	5.00	61	4.0	67	3.15	72
xix)	16	6.30	51	5.00	58	4.00	64	3.15	69	2.50	75
xx)	14	6.30	48	5.00	54	4.00	60	3.15	66	2.50	72

Table 5 (*Continued*)

Sl No.	**Width of Aperture** (R 20 Series)	**Heavy**		**Medium Heavy**		**Medium**		**Medium Light**		**Light**	
		Wire Diameter	Open Area	Wire Diameter	Open Area	Wire Diameter	Open Area	Wire Diameter	Open Area	Wire Diameter	Open Area
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	mm	mm	percent	mm	percent	mm	percent	mm	percent	mm	percent
xxi)	12.5	6.30	44	5.00	51	4.00	57	3.15	60	2.50	69
xxii)	11.2	5.00	48	4.00	54	3.55	57	3.15	60	2.50	67
xxiii)	10	5.00	44	4.00	51	3.15	57	2.50	64	2.00	69
xxiv)	9	4.00	48	3.15	54	2.50	61	2.24	65	1.80	69
xxv)	8	4.00	44	3.55	48	3.15	51	2.50	58	2.00	64
xxvi)	7.1	3.15	48	2.50	55	2.00	61	1.80	64	1.60	67
xxvii)	6.3	3.15	44	2.50	51	2.00	58	1.60	64	1.40	67
xxviii)	5.6	3.15	40	2.50	48	2.00	54	1.60	60	1.40	64
xxix)	5.0	3.15	37	2.50	44	2.00	51	1.60	57	1.40	61
xxx)	4.5	2.50	41	2.24	45	1.80	51	1.40	58	1.25	61
xxxi)	4.0	2.50	38	2.24	42	2.00	45	1.60	51	1.25	58
xxxii)	3.55	2.00	41	1.80	44	1.60	48	1.40	51	1.25	55
xxxiii)	3.15	2.00	37	1.80	41	1.60	44	1.40	48	1.12	54
xxxiv)	2.8	1.80	37	1.40	45	1.12	51	0.900	57	0.800	60
xxxv)	2.5	1.60	37	1.40	41	1.25	44	1.12	48	1.00	51
xxxvi)	2.24	1.40	38	1.12	44	0.900	51	0.710	58	0.630	61
xxxvii)	2.0	1.25	38	1.12	41	0.900	48	0.800	51	0.710	54
xxxviii)	1.8	1.40	32	1.12	38	0.900	45	0.710	51	0.630	55
xxxix)	1.6	1.00	38	0.800	44	0.630	51	0.500	58	0.450	61
xl)	1.4	0.900	37	0.710	44	0.560	51	0.450	57	0.315	66
xli)	1.25	0.800	37	0.630	44	0.500	51	0.400	57	0.315	63
xlii)	1.12	0.710	37	0.560	44	0.450	51	0.400	54	0.355	57
xliii)	1.00	0.710	34	0.630	38	0.500	44	0.400	51	0.355	54
	(µm)										
xliv)	900	0.500	41	0.450	45	0.355	51	0.315	54	0.250	61
xlv)	800	0.500	38	0.450	41	0.315	51	0.280	55	0.250	58
xlvi)	710	0.560	31	0.450	37	0.355	44	0.315	48	0.280	51
xlvii)	630	0.400	37	0.315	44	0.280	48	0.250	51	0.180	60
xlviii)	560	0.355	37	0.280	44	0.244	52	0.160	60	–	–

Table 5 (*Concluded*)

Sl No.	**Width of Aperture** (R 20 Series)	**Heavy**		**Medium Heavy**		**Medium**		**Medium Light**		**Light**	
		Wire Diameter	Open Area	Wire Diameter	Open Area	Wire Diameter	Open Area	Wire Diameter	Open Area	Wire Diameter	Open Area
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	mm	mm	percent	mm	percent	mm	percent	mm	percent	mm	percent
xlix)	500	0.400	31	0.315	37	0.250	44	0.200	51	0.160	57
l)	450	0.315	34	0.250	41	0.200	48	0.140	58	-	-
li)	400	0.280	35	0.250	38	0.224	42	0.180	48	0.125	58
lii)	355	0.355	25	0.280	31	0.200	41	0.180	44	0.125	55
liii)	315	0.250	31	0.200	37	0.160	44	0.112	54	–	–
liv)	280	0.224	31	0.180	37	0.160	40	0.112	51	–	–
lv)	250	0.180	34	0.160	37	0.140	41	0.125	44	0.100	51
lvi)	224	0.180	31	0.160	34	0.125	41	0.100	48	0.090	51
lvii)	200	0.160	31	0.140	35	0.125	38	0.090	48	–	–
lviii)	180	0.140	32	0.125	35	0.112	38	0.090	44	–	–
lix)	160	0.125	32	0.112	35	0.100	38	0.071	48	–	–
lx)	140	0.112	31	0.100	34	0.090	37	0.063	48	–	–
lxi)	125	0.100	31	0.090	34	0.080	37	0.063	44	–	–
lxii)	112	0.090	31	0.080	34	0.071	38	0.056	44	–	–
lxiii)	100	0.080	31	0.071	34	0.063	38	0.050	44	–	–
lxiv)	90	0.071	31	0.063	35	0.056	38	0.045	44	–	–
lxv)	80	0.063	31	0.056	35	0.050	38	0.045	41	–	–
lxvi)	71	0.056	31	0.050	34	0.045	38	0.040	41	–	–
lxvii)	63	0.050	31	0.045	34	0.040	37	0.036	41	–	–
lxviii)	56	0.045	31	0.040	34	0.036	37	0.032	41	–	–
lxix)	50	0.040	31	0.036	34	0.032	37	0.028	41	–	–
lxx)	45	0.036	31	0.032	34	–	–	–	–	–	–
lxxi)	40	0.032	31	0.030	33	0.025	38	–	–	–	–
lxxii)	36	0.030	30	0.028	32	–	–	–	–	–	–
lxxiii)	32	0.028	28	0.025	32	–	–	–	–	–	–
lxxiv)	28	0.025	28	–	–	–	–	–	–	–	–
lxxv)	25	0.025	26	0.022	28	–	–	–	–	–	–
lxxvi)	22	0.022	25	–	–	–	–	–	–	–	–
lxxvii)	20	0.020	25	–	–	–	–	–	–	–	–

ANNEX D

(*Foreword*)

COMMITTEE COMPOSTION

Sieves, Sieving and Other Sizing Methods Sectional Committee, CED 55

Organization	*Representative(s)*
In Personal Capacity, (*90, Savita Vihar, Vikas Marg, Delhi 110092*)	Dr R. P. Singhal **(*Chairperson*)**
AIMIL Limited, New Delhi	Shri Rohitash Barua Shri Madan Kumar Sharma (*Alternate*)
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Cement Corporation of India Limited, New Delhi	Shrimati Saraswathi Devi Shri Anurag Kumar Saini (*Alternate*)
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Industrial Wire Netting Company, New Delhi	Shri Keshav Gupta Shri Sanjay Gupta (*Alternate*)
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Organization	*Representative(s)*
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In Personal Capacity (*Indian Institute of Technology, Hauz Khas, New Delhi -201001*)	Prof B. Pitchumani
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Member Secretary
Dr Manoj Kumar Rajak
Scientist ‘D’/Joint Director
(Civil Engineering), BIS

(*Continued from second cover*)

The aperture sizes specified in IS 2405 (Part 1) : 1980 are also kept in this revision as Annex C which will be subsequently withdrawn once the stakeholders get used to this revised version.

This standard specifies that certain information should be supplied by the purchaser with enquiry and order for procurement of industrial sieves to suit the requirements.

Further, in this revision, the material requirements for the sieve media is improved to permit various new materials available for the product in the market. However, the choice for the selection of material is left to the user.

The composition of the Committee responsible for the formulation of this standard is given in Annex D.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 2022 ‘Rules for rounding of numerical values (*second revision*)’. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

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BUREAU OF INDIAN STANDARDS

Headquarters:

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